## **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) A flat plate heat transfer device comprising:

a thermally-conductive flat plate case installed between a heat source and a heat dissipating unit for containing a working fluid which evaporates by absorbing heat from the heat source and condenses by emitting heat at the heat dissipating unit; ~~and~~

~~at least one layer of~~ a sparse mesh layer which is installed in the case and ~~having~~ has wires woven so as to cross alternately, the sparse mesh providing a vapor passage for a diffused vapor working fluid along the wires, a weaving condition of the sparse mesh being controlled to provide a meniscus at wire junctions of the mesh, wherein the meniscus provides a return passage for condensed working fluid; and

a dense mesh layer installed in the case adjacently to the sparse mesh and having wires woven to cross alternately with a mesh number relatively greater than that of the sparse mesh, thereby providing a liquid passage for the working fluid;

wherein an upper and lower surface of a structure having the sparse mesh layer and the dense mesh layer are contacted with an inner side of the flat plate case ~~a vapor passage is formed along the surface of the wires from junctions of the mesh so that the evaporated working fluid is capable of flowing therethrough.~~

2. (currently amended) The flat plate heat transfer device according to claim 1, wherein an opening spacing of the sparse mesh according to the formula ~~[~~M=(1-Nd)/N~~]~~ ranges between 0.19 mm and 2.0 mm, where N is the mesh number, and d is a diameter (inch) of the wire.

3. (currently amended) The flat plate heat transfer device according to claim 1, wherein a diameter of the sparse mesh wire ranges between 0.17 mm and 0.5 mm.

4. (currently amended) The flat plate heat transfer device according to claim 1, wherein an opening area of the sparse mesh ranges between 0.036 mm$^2$ and 4.0 mm$^2$.

5. (currently amended) The flat plate heat transfer device according to claim 1, wherein the mesh number of the sparse mesh is not more than 60 on the basis of ASTM

specification E-11-95.

6. (cancelled)

7. (currently amended) The flat plate heat transfer device according to claim 1 ~~6~~, wherein an opening spacing of the dense mesh according to the formula ~~[~~M=(1-Nd)/N~~]~~ ranges between 0.019 mm and 0.18 mm, where N is the mesh number, and d is a diameter (inch) of the wire.

8. (currently amended) The flat plate heat transfer device according to claim 1 ~~6~~, wherein a diameter of the dense mesh wire ranges between 0.02 mm and 0.16 mm.

9. (currently amended) The flat plate heat transfer device according to claim 1 ~~6~~, wherein an opening area of the dense mesh ranges between 0.00036 $mm^2$ and 0.0324 $mm^2$.

10. (currently amended) The flat plate heat transfer device according to claim 1 ~~6~~, wherein the number of the sparse mesh is not more than 60 on the basis of ASTM specification E-11-95, while the number of the dense mesh is not more than 80 on the basis of ASTM specification E-11-95.

11. (currently amended) The flat plate heat transfer device according to claim 1 ~~6~~, wherein the dense mesh is arranged near the heat source, while the sparse mesh positioned on the dense mesh is arranged near the heat dissipating unit.

12. (currently amended) The flat plate heat transfer device according to claim 1 ~~6~~, further comprising a dense mesh layer installed in the case adjacently to the sparse mesh and having wires woven to cross alternately with a mesh number relatively greater than that of the sparse mesh, thereby providing a liquid passage for the working fluid;

wherein the sparse mesh is interposed between the dense mesh layers.

13. (currently amended) The flat plate heat transfer device according to claim 12, further comprising ~~at least one layer of additional~~ a dense mesh section for crossly connecting the dense meshes, which is provided ~~to at least~~ within ~~a part of~~ the sparse mesh ~~between the dense meshes~~ in order to provide a liquid passage for a working fluid.

14. (currently amended) The flat plate heat transfer device according to claim 1 ~~6~~, further comprising ~~at least one layer of~~ a middle mesh layer having the mesh number relatively greater than the sparse mesh and relatively smaller than the dense mesh.

15. (original) The flat plate heat transfer device according to claim 14, wherein the sparse mesh is interposed between the dense mesh and the middle mesh.

16. (currently amended) The flat plate heat transfer device according to claim 15, further comprising ~~at least one layer of additional~~ a dense mesh section for crossly connecting the dense mesh layers, which is provided within ~~and the middle mesh layer to at least a part of~~ the sparse mesh between the dense mesh and the middle mesh in order to provide a liquid passage.

17. (currently amended) The flat plate heat transfer device according to claim 15, further comprising ~~at least one layer of additional~~ a middle mesh section for crossly connecting the dense mesh layer and the middle mesh layer, which is provided within ~~to at least a part of~~ the sparse mesh between the dense mesh and the middle mesh in order to provide a liquid passage.

18. (original) The flat plate heat transfer device according to claim 15, wherein the dense mesh is arranged near the heat source, while the middle mesh is arranged near the heat dissipating unit.

19. (cancelled)

20. (currently amended) The flat plate heat transfer device according to claim 14 ~~19~~, wherein the middle mesh has a vapor flowing space so that the vapor from the sparse mesh flows therein.

21-30. (cancelled)

31. (withdrawn) A method for making a flat plate heat transfer device comprising the steps of:

forming upper and lower plates of a thermally-conductive flat plate case respectively;

inserting at least one layer of mesh into the case, the mesh having wires woven alternately in order to form a vapor passage through which an evaporated vapor is capable of flowing along the surface of the wires from junctions of the mesh;

making a case by uniting the upper and lower plates;

charging the working fluid into the united case in a vacuum state; and

sealing the case to which the working fluid is charged.

32. (withdrawn) A method for making a flat plate heat transfer device comprising the steps of:

forming upper and lower plates of a thermally-conductive flat plate case respectively;

inserting at least one layer of sparse mesh and at least one layer of dense mesh in the case, the sparse mesh having wires woven alternately and forming a vapor passage through which an evaporated working fluid is capable of flowing along the surface of the wires to junction of the mesh, the dense mesh having the mesh number relatively greater than the sparse mesh and providing a liquid passage for the working fluid;

making a case by uniting the upper and lower plates;

charging the working fluid into the united case in a vacuum state; and

sealing the case to which the working fluid is charged.

33. (withdrawn) The method for making a flat plate heat transfer device according to claim 31 or 32, wherein the upper and lower plates are united using one selected from the group consisting of brazing, TIG welding, soldering, laser welding, electron beam welding, friction welding, bonding and ultrasonic welding.